

Serial No. 09/974,845  
Reply to Office Action of July 28, 2005

Docket No. K-0332

**AMENDMENTS TO THE DRAWINGS:**

The attached drawings include changes to Figs. 1A, 1B and 2. These sheets, which include Figs. 1A, 1B and 2 replace the original sheets including Figs. 1A, 1B and 2. In Figs. 1A and 1B, the parameters IB\_REP and SEG\_POS have been added. In Fig. 1B, "246 bits" as been changed to --256 bits--. In Fig. 2, an SFN counter has been provided within the micro control part 30, and control signal 45 has been labeled.

Attachment: Replacement Sheets  
Annotated Sheets Showing Changes

**REMARKS**

Claims 1, 3-6 and 8-17 are pending in this application. By this Amendment, FIGs. 1A, 1B and 2, the specification and claims 1, 4-6, 9, 11 and 13-16 are amended and claims 2 and 7 are canceled without prejudice or disclaimer. Various amendments are made to the claims for clarity and are unrelated to issues of patentability.

The Office Action objects to the drawings under 37 C.F.R. §1.84(p)(5) because they do not include reference signals described in the specification. The above amendments obviate the grounds for objection. More specifically, FIGs. 1A and 1B have been amended to include the parameters IP\_REP and SEG\_POS as requested. Still further, FIG. 2 has been amended to include the SFN counter as requested. Additionally, a control signal 45 has been labeled in FIG. 2 as requested. Withdrawal of the objections to the drawings under 37 C.F.R. §1.84(p)(5) is respectfully requested.

The Office Action objects to the drawings under 37 C.F.R. §1.83(a). By this Amendment, dependent claims 2 and 7 are canceled. Withdrawal of the objection is respectfully requested.

The Office Action objects to the disclosure under 37 C.F.R. §1.71 and because of informalities. The attached Substitute Specification obviates the grounds for objection. As will be discussed below, the symbols % within the equations referenced on page 4, line 2, page 10, line 1 and page 11, line 4 are correct. That is, the symbol % is a very well known symbol to reference the modulo (modulus operation). These equations should therefore be understood to one skilled in the art.

Additionally, based on the comments made in item 4 of the Office Action (pages 3-4), the specification has been revised to obviate the further grounds for objection. In particular, the Substitute Specification includes paragraph numbers having four numerals rather than three numerals. Paragraphs [0002] and [0004] have been corrected based on the Office Action's comments. With regard to paragraph [0005], applicant has amended FIG. 1B to reference "256 bits" rather than "246 bits." This is consistent with the specification. Table 1 has also been amended to be consistent with FIG. 1A.

The Office Action states that the parameters "SIB\_REP", "SIB\_POS" have been used and that parameters "IB\_REP" and "SEG\_POS" have also been referred to. The specification has been amended to change "SIB\_REP" to --IB\_REP-- and to change "SIB\_POS" to --SEG\_POS--. These changes are consistent with Table 1 and Equations (1)-(2).

Additionally, paragraphs [0007]-[0009] have been amended. The Office Action appears to state that the symbol "%" is incomprehensible. However, "%" is used in the equation to represent the modulo (modulus) operation. The symbol "%" is an internationally accepted notation in electronic engineering fields, especially in computer engineering field. The modulo operation is also known as the "remainder operation" in which the result is the remainder of the division. For example  $5\%2$  equals 1, and  $11\%4$  equals 3. Therefore, the symbol "%" is proper and known to one skilled in the art. Additionally, equation (2) has been appropriately labeled. Still further, equation (4) on page 4 has also been corrected to reference (SEG\_POS). Thus, these equations should be understood.

Applicant believes that the above amendments (in the Substitute Specification) obviate

the grounds for objection to the disclosure. Withdrawal of the objection is respectfully requested. Should the Examiner have any further questions or concerns, he is invited to contact applicant's undersigned attorney.

The Office Action rejects claims 6, 9, 11 and 16 under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. However, as stated above, the symbol % is an internationally accepted notation in electronic engineering fields. Thus, one skilled in the art would have been able to make and/or use the features of dependent claims 6 and 9 from the present specification. Additionally, claim 11 has been amended to reference IB\_REP and SEG\_POS. Thus, claims 11 and 16 are consistent with one another. Withdrawal of the rejection is respectfully requested.

The Office Action rejects claims 1, 3, 4, 5, 8, 10, 12, 14, 15, and 17 under 35 U.S.C. §103(a) over U.S. Patent 5,621,732 to Osawa in view of U.S. Patent 6,853,852 to Park et al. (hereafter Park). The Office Action also rejects claims 2 and 7 under 35 U.S.C. §103(a) over Osawa and Park and further in view of the article IEEE Transactions on Consumer Electronic, Vol. 46, No.4, November 2000 by Lee et al. (hereafter Lee). The rejections are respectfully traversed with respect to the pending claims.

Independent claim 1 recites storing Radio resource controller System Information Messages (RSIMs) generated by information block segments from a radio network controller in a memory, calculating transmission time points of the RSIMs to the air, queuing the stored RSIMs in an order of transmission based on the calculated transmission time points with reference to the current time point, comparing the current time point with the transmission time point of the

RSIM to be transmitted earliest in the queued RSIMs at preset time intervals, and transmitting the RSIMs to the air if the current time point and the transmission time point of the RSIM are the same as a result of the comparison.

Osawa does not teach or suggest all these features of independent claim 1. More specifically, Osawa merely relates to terminals that are selected to function as relays. See col. 8, lines 57-60. The Office Action primarily relies on col. 9, lines 1-28 in order to show features of the claims. However, this section does not relate to the features of independent claim 1. In particular, Osawa does not relate to storing RSIMs generated from information block segments from a radio network controller in a memory. Osawa has no suggestion for RSIMs. Additionally, Osawa has no suggestion for storing information from a radio network controller. The Office Action's citation to col. 4, lines 63-65 does not relate to these features.

Additionally, Osawa does not calculate transmission time points, queuing the stored RSIM in an order of transmission based on the calculated transmission time points. Rather, the cited section of Osawa (col. 9, lines 1-28) merely relates to a receiving station list and determining a weighting information. This does not relate to calculating transmission time points of RSIMs and queuing the stored RSIMs in an order of transmission. The Office Action cites step 511 as corresponding to calculating transmission time points. However, Osawa does not suggest the claimed features. See Osawa's col. 8, lines 63-67 discussing step 511.

Still further, Osawa does not teach or suggest comparing the current time point with the transmission time point of the RSIM to be transmitted earliest in the queued RSIMs and transmitting the RSIMs to the air if the current time point and the transmission time point of the

RSIM are the same. The Office Action's citation to col. 9 does not teach or suggest these features as it merely relates to weighing information being provided. Additionally, col. 9, lines 1-28 does not suggest transmitting RSIMs. Rather, the cited section relates to updating a weighing list.

Park does not teach or suggest the features of independent claim 1 missing from Osawa. Accordingly, independent claim 1 defines patentable subject matter at least for this reason.

Each of independent claims 4 and 13 define patentable subject matter at least for similar reasons. For example, independent claim 4 recites receiving a system information renewal message from a radio network controller, and storing RSIMs generated by information block segments and scheduling parameters contained in the message. Independent claim 4 also recites calculating transmission time points of the RSIMs to the air, and forming a queue of the RSIMs based on the calculated transmission time points of the RSIMs according to a set queuing algorithm. Still further, independent claim 4 recites selecting a first element from the queue of the RSIMs at fixed time intervals, and transmitting the RSIM to the air when the transmission time point of the RSIM, the selected element, is the same with the current time point. For at least the reasons set forth above, Osawa and Park do not teach or suggest all these features. Thus, independent claim 4 defines patentable subject matter.

Independent claim 13 recites a first signal processing part for processing a system update message received from a radio network controller, a memory for storing RSIMs generated by information block segments and scheduling parameters contained in the processed message, and a control part for calculating transmission time points of the RSIMs to the air in advance, and

forming a queue of the stored RSIMs in an order from the earliest transmission to the air based on the calculated transmission time points. Still further, independent claim 13 recites a comparing part for comparing the current time point to the transmission time point of the RSIM to be transmitted at the earliest among the queue of the RSIMs at preset intervals under the control of a control signal, and a second signal processing part for processing the RSIM to be transmitted to the air according to a result of the comparison. For at least the reasons set forth above, Osawa and Park do not teach or suggest these features. Thus, independent claim 13 defines patentable subject matter.

Each of the dependent claims depends from one of the independent claims and therefore defines patentable subject matter at least for this reason. In addition, the dependent claims recite features that further and independently distinguish over the applied references.

For example, dependent claim 5 recites that whenever one RSIM is transmitted to the air at one of the fixed time intervals, calculating a next transmission time point of the transmitted RSIM and forming a new queue of RSIMs based on the next transmission time point. Osawa does not teach or suggest these features. That is, the Office Action asserts that Osawa's col. 9, lines 7-27 suggest these features. However, this section does not relate to calculating a next transmission time point of the transmitted RSIM and forming a new queue of RSIMs based on the next transmission time point. Accordingly, dependent claim 5 defines patentable subject matter at least for this additional reason.

Furthermore, dependent claim 14 recites that whenever one RSIM is transmitted at fixed intervals, the control part calculates the next transmission time point of the transmitted RSIM,

and forms a new queue of the RSIMs again by using a set queuing algorithm. Even still further, dependent claim 15 recites that when the next transmission time point of the transmitted RSIM is calculated, the control part inserts the next transmission time point in place of the prior transmission time point in the queue of the RSIM. For at least the reasons set forth above, Osawa and Park do not teach or suggest these features. Thus, dependent claim 15 defines patentable subject matter at least for this additional reason.

### **CONCLUSION**

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of claims 1, 3-6 and 8-17 are earnestly solicited. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney, **David C. Oren**, at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this,



Serial No. 09/974,845  
Reply to Office Action of July 28, 2005

Docket No. K-0332

concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and  
please credit any excess fees to such deposit account.

Respectfully submitted,  
FLESHNER & KIM, LLP



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Attachments:

Replacement Sheets  
Annotated Sheets  
Substitute Specification  
Marked-up Original Specification

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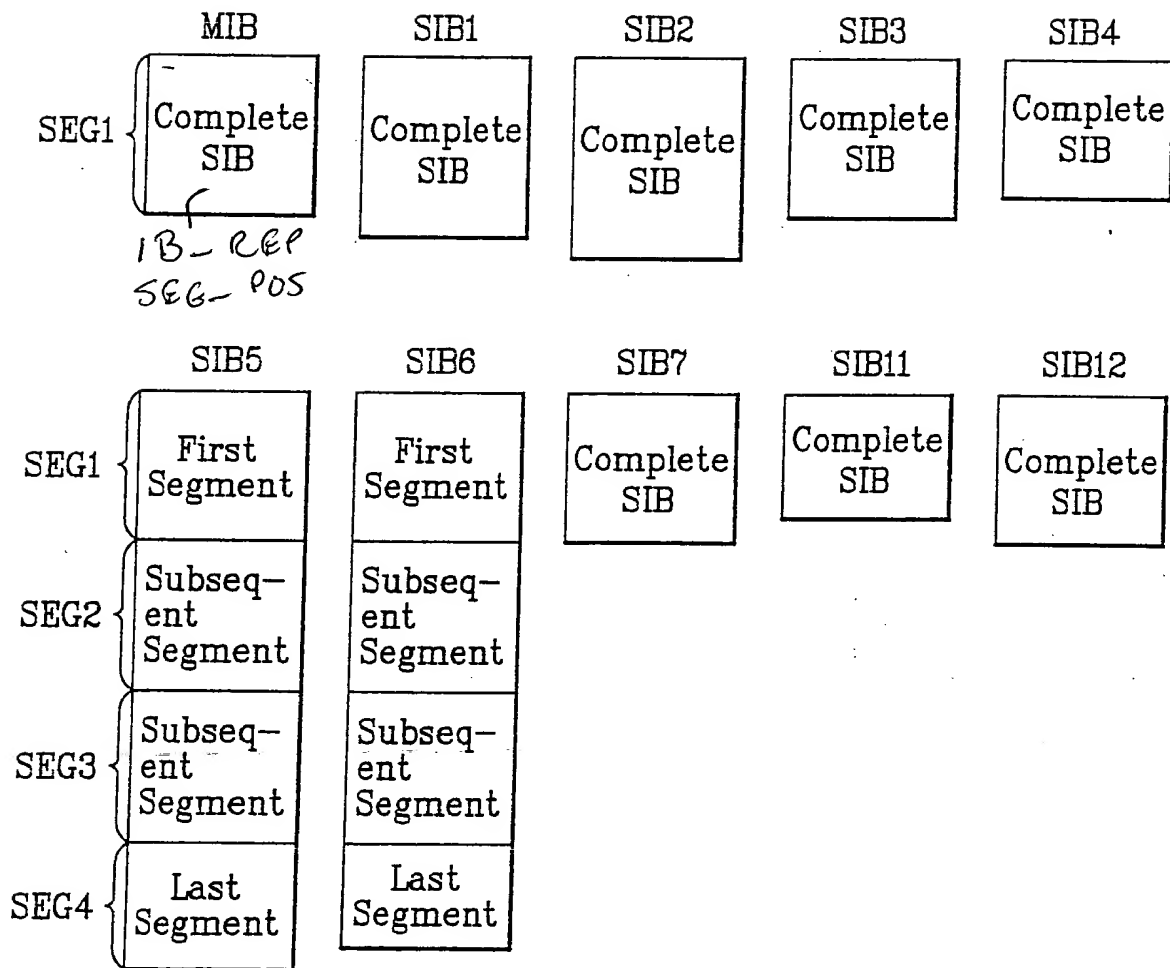
(703) 766-3701 DYK:DCO/knv/kah:cah

**Date: January 30, 2006**

**Please direct all correspondence to Customer Number 34610**



FIG.1A  
Related Art



ANNOTATED SHEET

FIG.1B  
Related Art

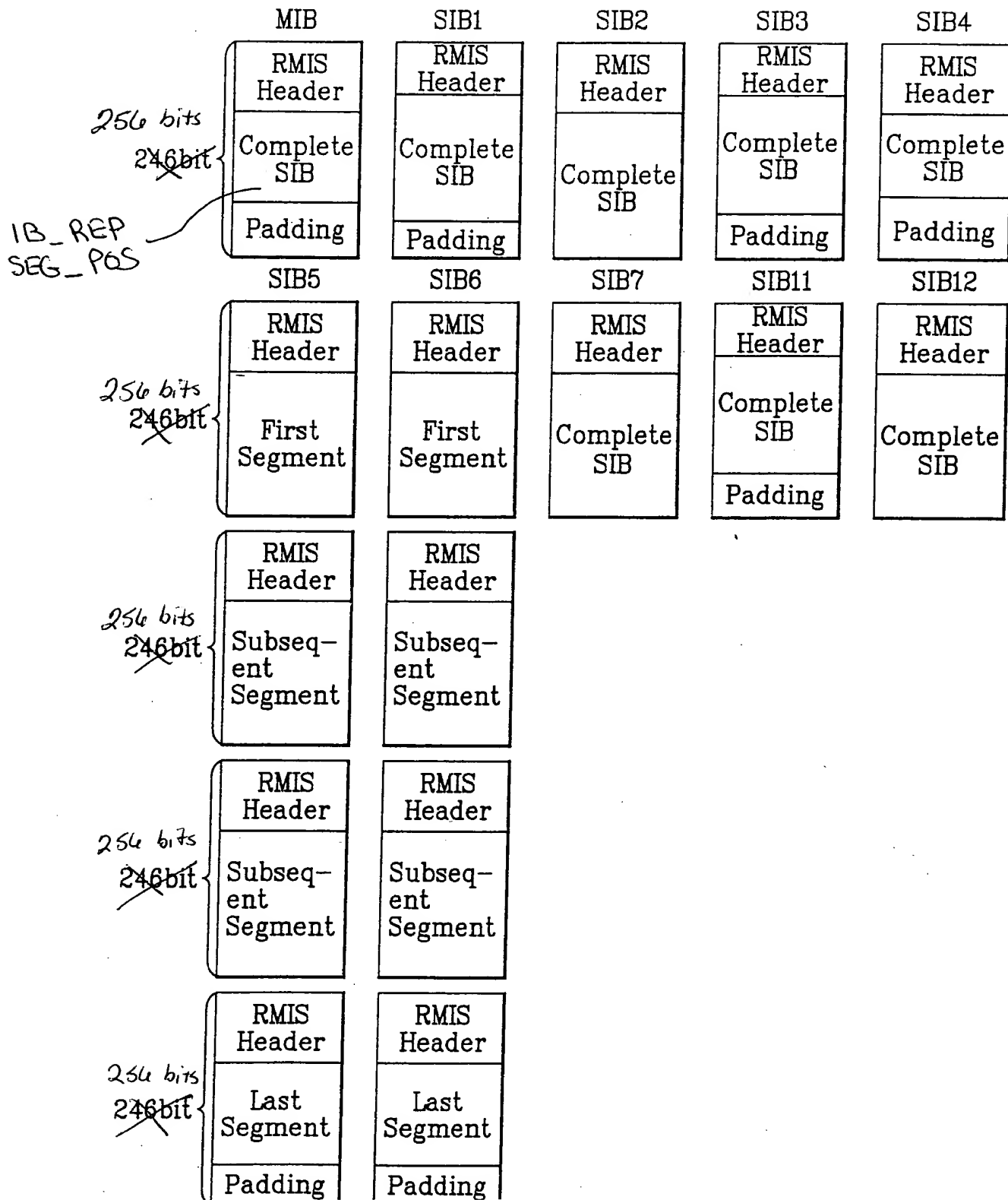
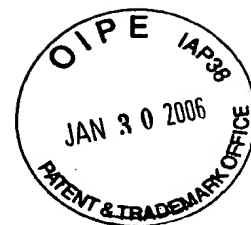


FIG.2

